Does Patient Experience Change with Age? Exploring Associations Between Patient Experience, Gender and Age

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RESEARCH

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ABSTRACT

Patient experience measurement is important for healthcare organizations to support the provision of high-quality care. Although previous research suggests age and gender may influence patient experiences, a thorough analysis of these associations remains unexplored. To address this gap, our research investigates the association of age and gender on patient experience ratings, using data from two widely used assessment tools: the Net Promoter Score (NPS) and the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS). Data analysis was performed on a total of 19,228 survey responses, collected from 2018 to 2022, in a public metropolitan hospital in Sydney, Australia. Our findings reveal that patient experience ratings differ significantly for people in different age groups, with older adults (>65 years) consistently reporting substantially higher satisfaction levels compared to younger adults (18–34 years). This finding was observed in both NPS and HCAHPS data; however gender-related disparities in patient experience ratings were not significantly different. These insights have substantial implications for healthcare organizations striving to optimize the patient experience and ensure that care delivery aligns with the evolving needs of patients across different age groups. Consequently, it is important for healthcare organizations to understand the varied experiences across diverse patient groups and to implement age-specific strategies, especially targeting the unique needs and expectations of young adults.

1. Introduction

Patient experience has increasingly been recognised as an essential dimension of healthcare quality, with information from patient experience measurement providing valuable insights to guide healthcare improvements.[1,2] Whilst generalised measures may provide a useful overview of the "typical" patient experience, these results may not reflect the nuanced experiences for various patient cohorts.[3] Specific patient cohorts may have distinct challenges with healthcare services, with varying needs, expectations, and goals. For instance, in the US, the highest rate of inpatient stays is from patients aged 65 years and over,[4] hence overall patient experience results may be more indicative of the experiences of older patients. Accordingly, healthcare organizations may overlook the unique needs for patients from both younger and older demographics. More data analysis may be required to deepen our understanding of patient experience for different cohorts.[5] To do this, healthcare organizations may be able to leverage the

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demographic information collected during the surveying process and conduct specialised analysis using patient demographics, such as age and gender.

A review of previous research shows mixed findings regarding the association between gender and patient experience ratings. Some studies suggest that females tend to report higher satisfaction than males,[6] whilst others report that males have more favourable overall experiences.[7] Gender-related disparities are also evident for specific components of healthcare services. For instance, females expressed concerns that focussed on nursing care, whereas male dissatisfaction tend to revolve around interactions with doctors and wait times.[8] Delving deeper into communication preferences, older males appear more influenced by interactions with doctors, while older females value nurse communication and staff responsiveness.[6,7] Conversely, studies have also concluded that gender does not have an impact on overall patient experience rating.[9–14] Collectively, these studies underscore the complexity of gender's role, suggesting that it not be a standalone predictor of patient experience.

Furthermore, a review of the existing research suggests a positive association between age and patient experience, with experience ratings tending to increase with a patient's age.[15–18] For example, patients aged 65 and above generally exhibit greater contentment with their care compared to younger cohorts, which is demonstrated in surveys conducted within family medicine practices in the US,[15,16] primary health clinics in South Africa,[13] and an extensive UK-based review of more than two million respondents to the English General Practice Patient Survey, which encompassed 8,267 general practices.[16] Interestingly, although the general trend shows increasing satisfaction with advancing age, the experience ratings often decline for patient's aged 75 and above.[16,18] Additionally, the bulk of the existing research primarily centres on primary care environments and predominantly explores the perspectives of older adults, specifically those aged 55 and above.[6,18] Accordingly, there is a notable research gap concerning the evaluation of age-related variances in patient experiences in acute care settings, especially in the context of younger adults' experiences.

As such, the primary objective of this study was to investigate the potential links between patient experience scores and the demographic factors of age and gender. Additionally, we explored whether specific HCAHPS questions correlate with the age or gender differences, including communication with nurses and doctors, responsiveness of hospital staff, communication about medicines, and cleanliness and quietness of hospital environment. Ultimately, this research aims to offer a deeper insight into patient experiences, thereby guiding more targeted and data-driven service improvements in hospitals.

2. Method

Design and setting: This study used cross-sectional observational methods conducted within a metropolitan public healthcare network situated in Sydney, Australia, consisting of over 500 acute inpatient beds across three hospital sites.

Data sources: Data from two patient experience survey tools were used to evaluate patient experience: the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) and the Net Promoter Score (NPS). Responses were submitted by patients following their discharge from the participating hospitals, between 2018 and 2022.

HCAHPS consists of 22 questions, spanning eight different domains: communication with nurses, communication with doctors, response of hospital staff, hospital environment, communication about pain, communication about medicines, pain management, discharge information, and care transitions. Patients can rate their experiences using a five-point Likert scale, which ranges from "Never" to "Always."[17,19] HCAHPS surveying was conducted biannually (Q2 and Q4), and patients were sent a copy of the HCAHPS survey within four weeks of discharge from the hospital, either via email or in paper format.

The Net Promoter Score (NPS) is a measure that gauges a patient's likelihood to recommend the healthcare service. This metric is generally presented as a numerical rating, complemented by an open-ended comment to outline their rating rationale. NPS responses are categorized into three groups: "Detractors" (scores 0-6), "Passives" (scores 7 & 8), and "Promoters" (scores 9 & 10).[2,20] The aggregate NPS is calculated by taking the difference between the percentages of Promoters and Detractors.[21] For NPS surveying, patients received a text message within three days of discharge from the hospital (using the Qualtrics survey system), which contained a link to the NPS survey. No reminders were sent for a non-response and participation was voluntary. NPS surveying was ongoing, and the study involved analysis of data collected over a four-year period, between March 2018 and April 2022.

Procedure: Ethical approval was provided by the participating organization's local Human Research Ethics Committee (2020/EH01195). Participation in the study was voluntary. Analysis was conducted on HCAHPS data that was collected from Q2 2018 to Q4 2022.

Variables: The primary indicators for patient experience utilized the NPS question, "How likely are you to recommend this hospital to family and friends?" and two pertinent questions from the HCAHPS survey: "overall hospital rating" and "willingness to recommend the hospital to family and friends". To ensure comparability and ease of interpretation, the patient experience scores derived from these HCAHPS questions were linearly adjusted to a scale ranging from 0 to 100.

The independent variables examined in this study were gender and age. Gender was categorised as male or female, whilst age was categorised as 18 – 34 years, 35 – 49 years, 50 – 64 years and ≥65 years. These categories were based on previous research approaches and Australian government guidelines. [22,23] Specific measures of hospital experience captured in the HCAHPS survey (measured on a 4-point Likert scale), including communication with nurses, communication with doctors, responsiveness of hospital staff, communication with medicines, cleanliness of hospital environment, and quietness of hospital environment, were also used as independent variables in the study. Average score for these items were used as a composite index in the analysis.

Analysis: To determine the association between age and gender with patient experience scores, descriptive statistics were used for the independent data sets for NPS and HCAHPS results. Gender and age differences in patient experience measures were assessed using Chi square test and analysis of Variance (ANOVA). Given that HCAHPS data had information regarding other factors influencing patient experience, such as communication and cleanliness, linear regression modelling was employed to further explore the independent influence of age and gender on patient experience outcomes, accounting for six other hospital experience dimensions. This involved a two-tiered modelling approach:

1. Age, gender, and additional hospital experience dimensions were incorporated into the model.
2. The next phase introduced interaction terms between each hospital experience metric and either age or gender. The coefficients of these interaction terms facilitated the evaluation of

how hospital experience measures, when paired with age or gender, impacted the outcomes collectively.

Throughout the analysis, a p-value of 0.05 or less was deemed indicative of statistical significance.

3. Results

A total of 19,228 responses were collected and analysed (with 16,942 from NPS and 2,286 from HCAHPS surveys). Females constituted 53.7% of the NPS sample and 57.5% of the HCAHPS sample. A notable overrepresentation was observed for individuals aged 65 and above in both the NPS (36.9%) and HCAHPS (59.2%) datasets. As shown in Table 1, while NPS scores remained uniform across genders, a distinct age-related upward trend was observed. Older patients, aged 65 and above, were significantly more likely to give higher overall ratings of the hospital compared to the younger cohort (aged 18-34 years).

According to the NPS data categorization, "Promoters" were predominantly male, with 77% of them reporting a willingness to recommend the service, in contrast to 73% of females. Elderly participants also constituted a larger proportion of Promoters (81.8%) compared to the younger demographic (70.9%). Conversely, the "Detractors" category displayed an inverse trend: respondents were younger (specifically between 18 to 34 years) and more likely to be female.

As shown in Table 2, the HCAHPS survey results highlighted a link between age and the willingness to recommend the health service, though this trend was more subtle. Overall, likelihood of recommending the hospital and assigning higher experience ratings were higher for males than females.

To explore the secondary research question, descriptive characteristics of the HCACPS survey items were used to create composite indexes in the analysis. As shown in Table 3, survey scores ranged from 2.93 to 3.80, with a score of 4 indicating highest rating. From a maximum score of 100, the converted scores for willingness to recommend and overall rating had average scores of 92.80 and 87.10 respectively.

Linear regression analysis was conducted on the HCAHPS data (see Table 4). Older adults (≥65 years) reported significantly higher overall rating than their counterparts, aged 18 to 34 (β 5.04, p=0.013). Markedly, this age-related difference was only observed in the overall hospital rating question,

Table 1. Descriptive characteristics of the NPS ratings for patient experience.

NPS survey (n=16,942)

Variables	Number of individuals in the NPS sample (n)	Mean NPS rating score (willingness to recommend hospital)		NPS sub-categories			
		Mean ±SD	F (p value)	Promoter n (%)	Passive n (%)	Detractor n (%)	χ^2 (p value)
Gender							
Females	7,843	8.7 ± 2.4	3.3 (<0.001)	5799 (73.9)	1097 (14.0)	947 (12.1)	26.9 (<0.001)
Males	9,099	8.8 ± 2.2		7008 (77.0)	1252 (13.8)	839 (9.2)	
Age categories							
18–34 years	2,515	8.1 ± 3.0	144.2 (<0.001)	1782 (70.9)	397 (15.8)	336 (13.4)	144.2 (<0.001)
35–49 years	2,934	8.5 ± 2.5		2182 (74.4)	470 (16.0)	282 (9.6)	
50–64 years	4,383	8.9 ± 2.1		3446 (78.6)	613 (14.0)	324 (7.4)	
≥ 65 years	5,749	9.1 ± 1.7		4701 (81.8)	727 (12.6)	321 (5.6)	

Table 2. Descriptive statistics of HCAHPS results for age and gender.

HCAHPS Survey (n=2,286)

	Number of individuals in the HCAHPS sample (n)	Willingness to recommend hospital		Overall rating of the hospital	
		Mean ± SD*	F (p value)	Mean ± SD*	F (p value)
Gender					
Females	950	91.7 ± 16.1	8.1 (0.005)	86.2 ± 19.3	5.0 (0.026)
Males	1,287	93.6 ± 14.2		87.9 ± 16.8	
Age categories					
18–34 years	120	90.2 ± 17.6	4.6 (0.003)	84.2 ± 20.0	
35–49 years	245	90.6 ± 16.4		83.8 ± 19.09	7.1 (<0.001)
50–64 years	524	92.5 ± 15.8		86.7 ± 19.4	
≥ 65 years	1,289	93.8 ± 13.8		88.6 ± 15.9	

Table 3. Frequencies for HCACPS survey items.

Description of the survey item	n	Mean + SD
Communication with nurses		
How often did nurses treat you with courtesy and respect?	2,268	3.80 ± 0.48
How often did nurses listen carefully to you?	2,244	3.60 ± 0.63
How often did nurses explain things in a way you could understand	2,234	3.59 ± 0.67
Communication with doctors		
How often did doctors treat you with courtesy and respect?	2,253	3.81 ± 0.48
How often did doctors listen carefully to you?	2,225	3.68 ± 0.64
How often did doctors explain things in a way you could understand?	2,225	3.64 ± 0.65
Responsiveness of hospital staff		
After you pressed the call button, how often did you get help as soon as you wanted it?	1,896	3.27 ± 0.78
How often did you get help in getting to the bathroom or in using a bedpan as soon as you wanted?	994	3.32 ± 0.82
Communications with medicines		
Before giving [you/your child] any new medicine, how often did hospital staff tell [you/you and your child] what the medicine was for?	1,500	3.49 ± 0.83
Before giving [you/your child] any new medicine, how often did hospital staff describe possible side effects in a way [you/your child] could understand?	1,479	2.93 ± 1.15
Cleanliness of Hospital environment		
During this hospital stay, how often were [your/your child's] room and bathroom kept clean?	2,234	3.61 ± 0.66
Quietness of hospital environment		
During this hospital stay, how often was the area around [your/your child's] room quiet at night?	2,202	2.97 ± 0.90
Willingness to recommend the hospital	2,129	92.80 ± 15.06*
Overall rating of the hospital	2,237	87.10 ± 17.94*

*Values rescaled to 0–100

Table 4. Associations between gender and HCAHPS ratings.

Variables	Willingness to recommend		Overall rating	
	β	P value	β	P value
Gender (Male)	−0.46	0.633	−1.03	0.282
Age categories				
35–49 years	0.76	0.119	3.70	0.119
50–64 years	2.19	0.749	3.95	0.066
$\geq$ 65 years	3.49	0.308	5.04	0.013*
Communication with nurses	3.40	< 0.001*	3.47	< 0.001*
Communication with doctors	1.69	< 0.001*	2.52	< 0.001*
Responsiveness of hospital staff	1.58	< 0.001*	2.11	< 0.001*
Communication with medicines	0.55	0.082	0.80	0.009*
Cleanliness of hospital environment	3.27	< 0.001*	3.81	< 0.001*
Quietness of hospital environment	0.14	0.826	1.46	0.019*
Communication with nurses $\times$ gender (Male)	−1.40	0.110	−0.25	0.774
Communication with doctors $\times$ gender (Male)	0.72	0.395	0.04	0.961
Responsiveness of hospital staff $\times$ gender (Male)	0.68	0.449	−0.77	0.391
Communication with medicines $\times$ gender (Male)	0.57	0.367	0.28	0.656
Cleanliness of hospital environment $\times$ gender (Male)	1.91	0.304	1.95	0.281
Quietness of hospital environment $\times$ gender (Male)	0.40	0.746	1.54	0.219

*Significant association; $\times$ indicates interaction effect.

not the willingness to recommend question in HC-AHPS.

Overall, four of the HCAHPS domains were found to be significantly and positively associated with both willingness to recommend and overall rating: communication with nurses, communication with doctors, responsiveness to staff, and cleanliness of hospital. Whilst communication with medicines and quietness of hospital was found to be significantly associated with overall hospital rating, there was no significant association with willingness to recommend results.

Notably, there were no significant associations between any HCAHPS domains and gender.

Analysis was also conducted to look at age-related differences for HCAHPS items (see Table 5), whereby an intriguing interaction effect was observed: individuals aged 50-65 years placed higher importance on hospital cleanliness for their overall satisfaction, compared to those aged 18-34. However, no other noteworthy interaction effects were identified.

4. Discussion

The results of this study demonstrate a significant association between age and patient experience ratings. However, this significance was not observed in the relationship between patient experience and gender. Analysis of both NPS (Net Promoter Score) and HC-AHPS (Hospital Consumer Assessment of Healthcare Providers and Systems) data indicate that older adults (aged 65 and above) report higher levels of patient satisfaction compared to their younger counterparts (aged 18-34). This disparity was most pronounced in the NPS data: younger adults averaged a NPS score of 8.1, categorizing them as "Passives," whilst older adults averaged a higher score of 9.1, placing them in the "Promoters" category. This contrast highlights a significant opportunity for improving patient experience, particularly among young adults. Conversely, analysis of NPS and HCAHPS data showed minimal gender-based differences in patient experience. Although male patients rated slightly higher across all three evaluation categories, indicating a marginally higher likelihood to recommend the health service and provide better overall hospital ratings than female patients, these differences were not substantial. These findings are consistent with prior research, which also found that gender disparities in patient experience are not statistically significant.[9–13]

To gain deeper insights into the variations in patient experience ratings across diverse age groups, we conducted a comprehensive analysis of the multi-item HCAHPS survey. Our research identified several key determinants associated with hospital ratings and patients' inclination to recommend the healthcare service: effectiveness of communication with nurses and doctors, hospital cleanliness, and promptness in responding to call bells. Our results are consistent with previous studies, which identified effective communication with doctors as the primary contributor to overall satisfaction, closely followed by positive interactions with nurses.[6] Upon thorough examination of age-related variables, however, our analysis yielded limited insights from the HCAHPS data that

Table 5. Associations between age and HCAHPS ratings.

Variables	Willingness to recommend		Overall rating	
	β	P value	β	P value
Communication with nurses × age (35–49)	4.27	0.068	0.55	0.811
Communication with nurses × age (50–64)	2.10	0.342	−1.32	0.551
Communication with nurses × age (≥ 65)	4.62	0.657	−0.46	0.824
Communication with doctors × age (35–49)	−1.36	0.542	−0.43	0.845
Communication with doctors × age (50–64)	−1.88	0.372	0.76	0.717
Communication with doctors × age (≥ 65)	−3.07	0.134	−1.39	0.494
Responsiveness of hospital staff × age (35–49)	−1.77	0.366	−1.95	0.314
Responsiveness of hospital staff × age (50–64)	−2.30	0.184	−0.85	0.623
Responsiveness of hospital staff × age (≥ 65)	−4.83	0.345	−2.51	0.118
Communication with medicines × age (35–49)	−4.61	0.103	−2.66	0.137
Communication with medicines × age (50–64)	−2.55	0.127	−1.33	0.424
Communication with medicines × age (≥ 65)	−3.00	0.065	−1.46	0.356
Cleanliness of hospital environment × age (35–49)	1.71	0.681	2.58	0.530
Cleanliness of hospital environment × age (50–64)	7.68	0.234	8.94	0.018*
Cleanliness of hospital environment × age (≥ 65)	5.12	0.154	5.25	0.140
Quietness of hospital environment × age (35–49)	3.43	0.251	1.08	0.716
Quietness of hospital environment × age (50–64)	3.07	0.270	−2.75	0.323
Quietness of hospital environment × age (≥ 65)	3.59	0.169	−0.54	0.835

*Significant association; × indicates interaction effect.

could explain these differences. Remarkably, only one factor exhibited statistical significance: "cleanliness of the room and bathroom" for adults aged 50–65 years for overall rating.

Although there is limited research about the causes of age-related differences in patient experiences, prior studies have suggested that physicians are more likely to engage in patient-centered interactions with older individuals compared to younger ones.[15] Whilst it is not possible to infer causality from the HCAHPS data utilized in this study, the differences in patient experience priorities and values across generations may inform healthcare managers' decisions in selecting and implementing patient-reported experience metrics. Prior research in the service industry indicates that customers from different generations prioritize different aspects of the employee affect and interaction.[24,25] For instance, older adults (aged 50 and above) often place greater emphasis on staff attributes of caring, expertise, and service recovery when assessing their satisfaction with a service. Conversely, younger adults (aged up to 25 years) reported higher levels of importance for staff friendliness, attentiveness, and speed of service delivery.[24] These differences may provide some explanation for the results of the present study and warrant further exploration for future research. Consequently, insights from customer experience research suggest that strategies focused on expediting service delivery, like shortening wait times, and improving interpersonal interaction quality (such as increasing staff attentiveness and friendliness) could be important for enhancing the consumer experiences of young adults.

Additionally, to gain a deeper understanding of age-specific variations in patient experiences, an in-depth analysis of qualitative data, especially the free-text comments from NPS and HCAHPS patient surveys, is recommended.[2]

5. Strengths & limitations

Our study presents several notable strengths, primary among them being the utilization of two widely recognized data collection tools - NPS and HCAPHS. Employing this dual-method approach allowed us to comprehensively evaluate and analyze patient experience, thereby enhancing the robustness of our results. Additionally, our analytical approach extended beyond simple description, incorporating modelling techniques to provide deeper insights into the factors influencing patient experience. However, it is important to acknowledge the limitations of this study. Firstly, our investigation encompassed the year 2020, a period profoundly impacted by the COVID-19 pandemic. This unique context may have influenced certain aspects of patient experience, such as an increased focus on cleanliness in HCAHPS ratings. Also, slight variations in data collection periods existed between the HCAHPS and NPS surveys, with longer data collection for HCAHPS. These differences were primarily driven by the objective of increasing data volume for analysis. Although efforts were made to mitigate potential biases resulting from these variations, they should be considered as a limitation. Additionally, gender data was gathered using binary categories (i.e., male and female); hence future

studies may consider exploring a broader spectrum of gender, including categories such as "unspecified" for individuals who do not identify as male or female.

6. Implications for policy, practice and research

This research highlights a critical area of inquiry: the experiences of younger adults in healthcare settings. We observed that young adults typically assigned a "Passive" rating in NPS surveys, a markedly lower score compared to the "Promoter" rating frequently given by older adults. This discrepancy suggests a shift in expectations among younger healthcare consumers, which is distinct from those of their older counterparts. To address this, healthcare organizations need to deepen their understanding of the experiences of younger patients in hospitals. While the HCAHPS and NPS surveys provide a standardized measurement tool, incorporating qualitative research methods could offer additional, nuanced insights, such as analyzing free-text comments, conducting interviews, and organizing focus groups.

This research revealed notable disparities in patient experience scores between younger and older adults; yet the HCAHPS survey failed to offer detailed explanations for these variances. This finding highlights possible limitations of the HCAHPS surveys in capturing the unique experiences of patients from various age groups. When choosing the most appropriate patient experience measure for use, healthcare leaders and managers should consider their patient demographics, as well as the comprehensiveness and reliability of various patient-reported experience tools. The results of this study suggest significant shortcoming in the HCAHPS survey's capacity to discern the reasons for age-related differences in patient experience ratings. This finding suggests the importance of reviewing and potentially revising the HCAHPS survey to more precisely assess the key factors affecting patient experience, aligning the survey items with current societal attitudes and consumer expectations.

7. Conclusion

The result of this study demonstrates a marked association between age and patient experience, with older individuals often reporting more positive experiences compared to younger adults. This trend was consistently reflected in both Net Promoter Score (NPS) and Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey data.

Although variations in patient experiences associated with gender were noted, these were not statistically significant. Notably, the study identified age-specific trends in NPS sub-categories: older adults were more commonly classified as "Promoters," while younger adults tended to fall into the "Passive" category. This marked distinction highlights the profound differences in patient experiences across different age demographics.

An analysis of HCHAPS data was unable to identify the nuanced factors influencing the age-related disparities in experiences, thereby suggesting the potential need to reassess the scope and utility of HCAHPS surveying in contemporary healthcare settings. However, additional insights may be obtained by incorporating qualitative methods of data collection, such as like analyzing free-text comments and conducting focus groups. In summary, our research highlights notable discrepancies in patient experience ratings between younger and older adults, which emphasizes the importance of implementing age-specific strategies to improve the patient experience – particularly for young adults in the hospital setting.

Data availability

The data that support the findings of this study are available from the corresponding author, CA, upon reasonable request.

Funding

Ethics approval

Ethics approval was provided by the participating organization's local Human Research Ethics Committee (2020/ETH01195).

Conflict of interest

The authors declare that there is no conflict of interest.

References

1. Harrison R, Walton M, Manias E, Mears S, Plumb J. Patients' experiences in Australian hospitals: A systematic review of evidence. *Australian Health Review*. 2017;41(4). doi:10.1071/AH16053

2. Adams C, Harrison R, Iqbal MP, Schembri A, Walpola R. From detractors to promoters: A comparative analysis of patient experience drivers across net promoter score subcategories. *Int J Nurs Pract*. 2024 Feb;30(1):e13197. doi:10.1111/ijn.13197.

3. Vyas A, Allen L, Brown A, et al. Measuring what matters: A proposal for reframing how we evaluate and improve experience in healthcare. *Patient Exp J*. 2022;9(1). doi:10.35680/2372-0247.1696

4. Sun R, Karaca Z, Wong HS. Trends in hospital inpatient stays by age and payer. *Agency for Healthcare Research and Quality*. Published January 2018. Accessed October 9, 2023. https://hcup-us.ahrq.gov/reports/statbriefs/sb235-Inpatient-Stays-Age-Payer-Trends.jsp

5. LaVela S, Gallan A. Evaluation and measurement of patient experience. *Patient Exp J*. 2014;1(1).

6. Chumbler NR, Otani K, Desai SP, Herrmann PA, Kurz RS. Hospitalized older adults' patient satisfaction: Inpatient care experiences. *Sage Open*. 2016;6(2). doi:10.1177/2158244016645639

7. Elliott MN, Lehrman WG, Beckett MK, Goldstein E, Hambarsoomian K, Giordano LA. Gender differences in patients' perceptions of inpatient care. *Health Serv Res*. 2012;47(4):1482–1501. doi:10.1111/j.1475-6773.2012.01389.x

8. Foss C. Gender bias in nursing care? Gender-related differences in patient satisfaction with the quality of nursing care. *Scand J Caring Sci*. 2002;16(1). doi:10.1046/j.1471-6712.2002.00045.x

9. Janicic R, Lecic-Cvetkovic D, Filipovic V, Vukasinovic Z, Jovanovic V. Patients' satisfaction as key point in healthcare services. *HealthMED*. 2011;5(6).

10. Afzal M, Rizvi F, Azad AH, Rajput AM, Khan A, Tariq N. Effect of demographic characteristics on patient's satisfaction with health care facility. *Journal of Postgraduate Medical Institute*. 2014;28(2).

11. Gajovic G, Kocic S, Radovanovic S, et al. Satisfaction of users in primary health care. *HealthMED*. 2012;6(12).

12. Dulgerler S, Ertem G, Ozer S. The satisfaction levels of patients health services to apply university hospital in Turkey. *HealthMED*. 2012;6(8).

13. Padayachee H, Hoque ME, Mutambara E. Patient experience of primary health care users in KwaZulu-Natal. *Afr J Nurs Midwifery*. 2020;22(1). doi:10.25159/2520-5293/6317

14. Campbell JL, Ramsay J, Green J. Age, gender, socioeconomic, and ethnic differences in patients' assessments of primary health care. *Quality in Health Care*. 2001;10(2). doi:10.1136/qhc.10.2.90

15. Peck BM. Age-related differences in doctor-patient interaction and patient satisfaction. *Curr Gerontol Geriatr Res*. 2011. doi:10.1155/2011/137492

16. Lyratzopoulos G, Elliott M, Barbiere JM, et al. Understanding ethnic and other socio-demographic differences in patient experience of primary care: Evidence from the english general practice patient survey. *BMJ Qual Saf*. 2012;21(1):21–29. doi:10.1136/bmjqs-2011-000088

17. Elliott MN, Lehrman WG, Goldstein E, Hambarsoomian K, Beckett MK, Giordano LA. Do hospitals rank differently on HCAHPS for different patient subgroups? *Medical Care Research and Review*. 2010;67(1):56–73. doi:10.1177/1077558709339066

18. Elliott MN, Beckett MK, Cohea C, et al. The hospital care experiences of older patients compared to younger patients. *J Am Geriatr Soc*. 2022;70(12):3570–3577. doi:10.1111/jgs.18003

19. Rodriguez-Homs LG, Hammill BG, Ryser MD, Phillips HR, Mosca PJ. Relationship between HCAHPS scores and survey response rate is linked to hospital size. *J Patient Exp*. 2020;7(6):1543–1548. doi:10.1177/2374373520932458

20. Krol MW, de Boer D, Delnoij DM, Rademakers JJDJM. The net promoter score - an asset to patient experience surveys? *Health Expectations*. 2015;18(6). doi:10.1111/hex.12297

21. Adams C, Walpola R, Schembri AM, Harrison R. The ultimate question? Evaluating the use of net promoter score in healthcare: A systematic review. *Health Expectations*. 2022;25(5). doi:10.1111/hex.13577

22. Franssen T, Stijnen M, Hamers F, Schneider F. Age differences in demographic, social and health-related factors associated with loneliness across the adult life span (19–65 years): a cross-sectional study in the Netherlands. *BMC Public Health*. 2020;20(1). doi:10.1186/s12889-020-09208-0

23. Australian Institute of Health and Welfare. Older people. Australian Government. Published August 15, 2023. Accessed October 9, 2023. https://www.aihw.gov.au/reports-data/population-groups/older-people/overview

24. Beauchamp MB, Barnes DC. Delighting baby boomers and millennials: Factors that matter most. *Journal of Marketing Theory and Practice*. 2015;23(3). doi:10.1080/10696679.2015.1032472

25. Pekovic S, Rolland S. Recipes for achieving customer loyalty: A qualitative comparative analysis of the dimensions of customer experience. *Journal of Retailing and Consumer Services*. 2020;56. doi:10.1016/j.jretconser.2020.102171